

U.S. Patent Application Serial No. 10/574,278  
Amendment filed September 3, 2009  
Reply to OA dated March 5, 2009

### **REMARKS**

By the present amendment, claim 4 has been amended as suggested in order to more particularly point out, and distinctly claim the subject matter to which the applicants regard as their invention. An Abstract is re-submitted, as suggested by the Examiner. The applicants respectfully submit that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated March 5, 2009. Entry of these amendments is respectfully requested.

In the Action, claim 4 was been rejected under the second paragraph of 35 USC § 112 as being indefinite. Specifically, it was asserted that the language used in claim 4 is garbled and inaccurate relative to the cited portion of the specification. Reconsideration of this rejection in view of the above claim amendments and the following comments is requested.

In response as to the rejection, the suggestion of the examiner has been adopted to have step (D) read as follows:

“adding the thus-obtained CMPB-containing concentrate [in] to an ether solvent and then adding the resultant solution to a hydrocarbon solvent to precipitate CMPB crystals.”

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Accordingly, withdrawal of the rejection under the second paragraph of 35 USC § 112 is respectfully requested.

Claim 1 was rejected under as being anticipated under USC § 102(b) by the previously cited publication to Tanaka et al. In making this rejection, it was asserted that the publication teaches crystals of the composition as claimed. Specifically, it was asserted that example 3c on page 3047 is the same as that claimed. Reconsideration of this rejection in view of the above claim amendments and the following comments is requested.

The Tanaka et al publication discloses the same basic compound as disclosed in the present specification (see Table 1, Entry 3 of the Tanaka et al publication). Specifically, regarding the compound, the Tanaka et al publication discloses that “[t]he isolation of the product 3 from the disulfide 4 can be easily performed by a fractional recrystallization from acetone and/or methanol” as is set forth on page 3047, left column, lines 2-5 thereof.

Here, the isolation of the product 3 is conducted by recrystallizing the by-product 4 (bis(2-benzothiazoyl) disulfide 4), which is a disulfide, using acetone and/or methanol to make the crystallized by-product 4 poorly soluble in the solvent, so that the product 3 can be isolated. Specific attention is directed

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to the attached Declaration of Mr. Iaso Wada, one of the inventors herein, which explains and/or clarifies the isolation process according to the Tanaka et al publication.

More particularly, according to the Declaration, an experiment was conducted wherein the compound 3 was isolated in the same manner as disclosed in the Tanaka et al publication. The crystals formed during the process then were analyzed using an NMR.

The results show that all the crystals A to C obtained in the synthesis process were identified to be bis(2-benzothiazoyl) disulfide 4, which is the by-product 4, from the NMR charts (Figs. 1 to 3). Any peaks attributable to 2 $\beta$ -chloromethyl-2 $\alpha$ -methylpenam-3 $\alpha$ -carboxylic acid benzhydryl ester (CMPB) were not observed in the charts.

Consequently, the isolation of the product 3 described on page 3047, left column, lines 2 to 5 of the Tanaka et al publication, is not recrystallizing the product 3 itself to separate the product 3 from bis(2-benzothiazoyl) disulfide 4, but bis(2-benzothiazoyl) disulfide 4, which is a by-product, is removed by recrystallization, so that the product 3 is isolated.

Furthermore, the Tanaka et al publication discloses on page 3047, left column, lines 30 to 35, the results of measurement in physical properties of compound (3c) (CMPB). Here, the IR spectra were

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recorded in a neat phase, rather than in a crystal phase. Because the melting point (mp) of compound (3c) was not recorded, it is clear that the measurement of the physical properties of compound (3c) was not conducted in a crystal form.

Accordingly, it is submitted that the Tanaka et al publication does not disclose the crystal of the product 3, and the product 3 is fundamentally different from the crystal of the presently claimed invention. Additionally, the Tanaka et al publication fails to disclose the features of the product 3, and, therefore, the crystal of the presently claimed invention cannot be easily attained from the disclosure thereof.

For the reasons stated above, withdrawal of the rejection of claim 1 under rejection under 35 USC § 102(b) is requested and allowance of claim 1 over the cited Tanaka et al publication is respectfully requested.

In the Action, it was indicated that (a) the "Taiwan Office Action" has been stricken from the IDS of October 12, 2007, since a copy of the Action has not been provided. In addition, it was indicated (b) the reference AI had been stricken since a full copy of the patent had not been provided.

From a careful review, it would appear that the position of the examiner is basically accurate with respect to (a) and (b). The Office Action indicated as being from Taiwan as submitted was simply a list

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of various references which have been included in the IDS. The list was apparently included in a Taiwanese Office Action, but a portion is in a non-English language.

As to (b) reference AI in the Information Disclosure Statement, the IDS indicates that only a partial copy was submitted. This reference apparently corresponds to a US patent. Since there is complete correspondence between the two, it is submitted that a full copy of the Taiwanese patent is not necessary given the citation of the equivalent U.S. patent.

Finally, the examiner apparently objected to the submission of two abstracts for the subject application. While there is no record of doing so, it is requested that the examiner to enter the Abstract as shown in the attached Appendix.

In view of the aforementioned amendments and accompanying remarks, claims 1 and 4, as amended, are in condition for allowance, which action is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosures: Replacement Abstract  
Petition for Extension of Time  
Declaration under 37 C.F.R. §1.132 (a set of comparative test results) of Mr. Isao Wada